

**The rejection of Claims 1 - 3, 7 and 17 under 35 U.S.C. 103(a) as being unpatentable over JP '992. is respectfully traversed.**

In a previous Office Action, the Examiner took the following position:

“JP ‘ 992 discloses a composition comprising 20 - 25% coconut oil, lauryl alcohol ethoxylate, octyl phenol, and water. See abstract. The prior art does not disclose the instant amount of coconut oil between 40 and 90%. The reference discloses the composition as a detergent. In the absence of unexpected results, one having ordinary skill in the art would have been expected to determine the optimum amount of oil through routine experimentation. Optimization may result in the composition comprising the instant range of oil.”

In the instant Office Action, the Examiner takes the following position:

“Both the prior art composition as well as the instant composition comprise alkyl alcohol ethoxylates (alkyl oxyalkylate). On page 5 lines 2-3 of the instant specification, an alkyl oxyalkylate is defined as an antifoaming agent. Therefore, one having ordinary skill in the art would expect for the prior art composition to have foam. If the large amount of said alkyl is the applicants invention, applicant must show unexpected results - since both the prior art composition and the instant composition are made up of the same chemicals.”

JAP '992 discloses a detergent composition comprising 15 - 30%, preferably 20 - 25% by weight of coconut oil; 5 - 15%, preferably 8 - 10% by weight of corn oil. Accordingly, the composition comprises at a minimum of 20% and a **maximum** of 45% by weight of oil and a preferred minimum of 28% by weight and a preferred maximum by weight of 35% of oil. The maximum of 45% by weight of oil can only be reached if one assumes that the composition should comprise the maximum amount of coconut oil and a maximum amount of corn oil. The Applicants respectfully submit, however, that no such teaching is found in the cited reference. Further, the Applicants are unable to find a basis or reason in the cited reference that teaches that the maximum amount of corn and coconut oil should be used in the detergent composition. Indeed, as shown in the cited

reference, the preferred composition comprises 20 - 25% by weight of coconut oil and 8 - 10% by weight of corn oil such that the **preferred maximum** is only 35% by weight of vegetable oil. Thus, the cited reference **teaches away** from using a large amount of vegetable oil as taught and claimed in the subject application. As proposed by the Examiner, the prior art composition comprises alkyl alcohol ethoxylates (alkyl oxyalkylate) which is defined as an "antifoaming agent" in the subject specification and therefore one having ordinary skill in the art would expect for the prior art composition to have foam. In contrast, however, the subject specification discloses that alkyl ethoxylate (alkyl oxyalkylate) may be used as an **emulsifier or a foaming agent** depending on the particular composition. The Applicants respectfully submit that they are **unable** to find any teaching or suggestion that the lauryl alcohol ethoxylate as used in the reference composition **operates as a foaming agent**. Indeed, the Applicants are unable to find in the cited reference any teaching or suggestion that foaming is or would be desirable.

The Applicants respectfully submit that while the detergent composition may include the ingredients of the subject invention, obviousness must be determined for the claimed subject matter as a whole, without ignoring the extraordinary improvement over the prior art or the different properties provided in the claimed subject matter. The Applicants submit that the detergent composition of the cited reference "comprises blending coconut oil, corn oil, octyl phenol nonionic surfactant, tall oil fatty acid amine soap and lauryl alcohol ethoxylate; into water and a mineral ion liq which is added to the detergent." The Applicants submit that the composition of Claim 1, as amended, **consisting essentially of** about 40% to about 90% by weight of vegetable oil; an emulsifier; and a foaming agent. The Applicants further submit that they are unable to find any teaching as to whether all the ingredients, acting together, in the cited reference would produce a composition that is capable of forming a stable foam.

In addition to the forgoing, **secondary considerations** should also be evaluated in determining obviousness. Such is true even when the claimed invention involves only relatively simple concepts. It is a basic tenet of patent law that one is not permitted to ignore the results and advantages produced by claimed subject matter simply because the claim limitations may be similar to those of the prior art. Obviousness determinations must include consideration of the invention

as a whole, including its structure, its properties, and the problem it solves.

As previously stated, the subject invention, as claimed, in amended Claim 1 is an agricultural composition for producing a foam for use in protecting plants against frost or freezing temperatures **consisting essentially of** about 40% to about 90% by weight of vegetable oil, an emulsifier, and a foaming agent. The Applicants respectfully submit that the relative large amount of vegetable oil is necessary for producing a stable foam effective for protecting plants from frost and freezing temperatures. In contrast, the composition disclosed in JAP '992 is for a detergent and teaches the use of relatively **low** percentages of vegetable oil. While it appears that the composition **may** comprise 45% by weight of vegetable oil, the Applicants submit, however, that there is no teaching or suggestion that a *maximum amount of corn oil and the maximum amount of vegetable oil* should or could be combined in order to arrive at the lower range of the amount of vegetable oil of the subject invention. Indeed, as previously stated, JAP '992 teaches that the **preferred amount** of vegetable oil is **less** than that taught and claimed in the subject invention. Further, the Applicants are unable to find any teaching or suggestion that would motivate one to modify and use the detergent disclosed in JAP '992 to produce a foam for protecting plants from frost and freezing temperatures and the Applicants are unable to find any motivation for one skilled in the art of plant protection to look at such detergents to develop a foam for plant protection. Indeed, the Applicants are unable to find any teaching that would motivate one to use a large percentage of vegetable oil to produce a foam for plant protection. Accordingly, in addition to the differences in the compositions, as shown in the above remarks, important **functional differences exist**.

In view of the foregoing, the Applicants respectfully submit that Claims 1 - 3, 7, and 17 as being rejected under 35 U.S.C. 103(a) as being unpatentable over JAP '992 should be withdrawn.

**The rejection of Claims 1 and 22 under 35 U.S.C. 103(a) as being unpatentable over Roberts (US 5,580,567) is respectfully traversed.**

The Examiner takes the position that both the prior art composition as well as the instant composition comprise alkyl alcohol ethoxylates (alkyl oxyalkylate) which is defined as an antifoaming agent. Therefore, one having ordinary skill in the art would expect the prior art

composition to have foam. Further, the Examiner states that neither Claim 1 nor claim 22 list water as a component. Therefore, water does not have to be a component of the instant composition.

The Applicants respectfully submit that the composition of Roberts comprises a spray oil, a surfactant and a buffering agent in the amount to reduce the pH to below about 7. As previously stated, the Applicants submit that they are unable to find in the subject application any teaching that alkyl oxyalkylate is defined as an “antifoaming agent.” The Applicants have found that with their composition, alkyl oxyalkylate is an effective foaming agent, however, in Roberts, the Applicants are unable to find any teaching that alkyl oxyalkylate is being used as a foaming agent. Indeed, Roberts identified foaming as a application **problem** (See Col. 1, lines 26 - 31). Accordingly, Roberts discloses that foaming is a problem and therefore **teaches away** from using a foaming agent.

Roberts discloses numerous surfactants or emulsifiers that would be effective for use with various spray oils for a adjuvant. It appears that the Examiner has taken the position that since alkyl alcohol ethoxylates is an alkyl oxyalkylate which has been identified in the subject application as an emulsifier and as a foaming agent, one having ordinary skill in the art would expect for the prior art composition to have foam. The Applicant again restates that Roberts teaches that foaming is a problem. The Applicants respectfully submit that while Roberts may have suggested that an alkyl oxyalkylate may be used in the adjuvant composition, the mere identification of a chemical compound is not sufficient to constitute both a description and an enabling disclosure of the claimed composition. To do so would enable one to permute all possible chemical combination of elements, publish the list and effectively prevent others from securing patent rights on compounds that may never have been isolated and for which uses may never theretofore have been previously been conceived.

In view of the foregoing, the Applicants respectfully submit that the rejection of Claims 1 and 22 under 35 U.S.C. 103(a) as being unpatentable over Roberts (US 5,580,567) should be withdrawn.

**The Rejection of Claims 25 - 27 under 35 U.S.C. 103(a) under JP ‘992 as applied to**

**claims 1 - 3, 7, 15 and 17 and in view of JP '097 or Blandiaux et al. (U.S. 5,958,852) is respectfully traversed.**

The Applicants restate the arguments made hereinabove with respect to JP '992. The Examiner also takes the position that it would have been obvious to one having ordinary skill in the art to combine references to arrive at the instant composition. One would have been motivated to do this because all references disclose compositions having the same utility, i.e., all references teach detergent compositions having the same utility to form a new composition. As further stated by the Examiner, in a claim drawn to a composition, the intended use be it for a detergent or a plant protectant has no patentable weight. Therefore, the problem that the composition solves has no patentable weight in a claim drawn to a composition. The Applicants respectfully submit that while one skilled in the art may be motivated to combine the teachings of the cited references **to develop a detergent**, there is no teaching or suggestions in the cited references that would motivate one skilled in the art of detergents to combine the teachings of the cited references **to arrive at a composition for protecting plants from frost or freezing temperatures**. Further, foaming, particularly stable foam, may not be desirable for a particular detergent formulation e.g. dishwashing detergent. It is well established in patent law that *prior art references in combination do not make an invention obvious unless something in the prior art references would suggest the advantage to be derived from combining their teachings*. The mere fact that one may select and rearrange various elements disclosed in the prior art to arrive at the claimed invention does not support a claim for obviousness unless there is some motivation to combine the references. The Applicants respectfully submit that the only teaching or suggestion that would motivate one skilled in the detergent arts to combine the cited references to arrive at a composition that would produce a stable foam for protecting plants from frost and freezing temperatures is the subject disclosure itself. Such motivation cannot be used to render the subject invention obviousness.

In addition, Claim 25 comprises a pre-emulsion concentrate comprising a crude vegetable oil, an emulsifier, a foaming agent and water. The Applicants are unable to find in the cited references a teaching of a foaming agent. Indeed, the Applicants are unable to find in the JAP '097 reference any teaching that the detergent should or could be emulsified into water. Accordingly,

neither JAP '992 and JAP '097 teach or suggest the desirability of foaming or the use of a foaming agent. While the Examiner takes the position that "...the instant specification, an alkyl oxyalkylate is defined as an antifoaming agent. Therefore, one having ordinary skill in the art would expect for the prior art composition to have foam." The Applicants submit that alkyl oxyalkylates have numerous uses including uses as **emulsifiers and as foaming agents**. However, the Applicants are unable to find in the cited references any teaching that alkyl oxyalkylate is or should be used as a foaming agent. The Applicants submit that the only teaching or suggestion of alkyl oxyalkylate being used as a foaming agent is taught in the subject specification.

In view of the foregoing, the Applicants respectfully submit that Claims 25 - 27 under 35 U.S.C. 103(a) under JP '992 as applied to Claims 1 - 3, 7, 15 and 17 and in view of JP '097 or Blandiaux et al. (U.S. 5,958,852) should be withdrawn.

**The rejection of Claims 35, 42 - 44 under 35 U.S.C. 103(a) as being unpatentable over Henriet et al. is respectfully traversed.**

The Examiner takes the position that Henriet et al. discloses a method for treating crops with a composition comprising a pesticide, vegetable oil, an emulsifying system, and water. The Examiner further takes the position that with respect to the amount of vegetable oil required, one having ordinary skill in the art at the time the invention was made would have determined the optimum amount of vegetable oil through routine experimentation. One would have been motivated to do this so that the most effective composition would have been developed.

The Applicants respectfully submit that the composition of Henriet comprises a pesticide a vegetable oil solvent and an emulsifying surfactant. In contrast the composition of Claim 35, as amended, comprising about 40% to about 90% by weight of vegetable oil and an emulsifier. Thus, vegetable oil is the **principal component of the composition**. In contrast, the vegetable oil of Henriet operates **as a solvent** for the pesticide. The applicants are unable to find any teaching or suggestion that the amount of vegetable oil for use as a solvent, medium, or carrier should or could be about 40% to about 90% by weight. Indeed, the Applicants are unable to find **any teaching** in the cited reference as to the effective amount of each component. The Examiner has taken the

position that one having ordinary skill in the art at the time of the invention would have determined the optimum amount of vegetable oil through routine experimentation. One would have been motivated to do this so that the most effective composition would have been developed. The Applicants, however, submit that the motivation would be to **optimize the amount of vegetable oil to be used as a solvent** for the particular pesticide selected. Further, the particular pesticide is nowhere taught in the cited reference and there is no teaching that using such a large amount of vegetable oil as a solvent would not adversely effect its use as a solvent for a pesticide. In addition, the composition of the subject invention comprises about 40% to about 90% by weight of vegetable oil and us therefore **the primary component** of the subject composition is vegetable oil. The Applicants again submit that the vegetable oil of Henriet operates as a solvent for the particular pesticide and there is no teaching or suggestion as to the amount of vegetable oil. It is a basic tenant of patent law that going from the prior art to the claimed invention, one cannot base obviousness upon what a person skilled in the art might try or might find obvious to try but rather must consider **what the prior art would have led a person skilled in the art to do**. The Applicants submits that the composition of Henriet is a new emulsifiable concentrate containing one or more pesticide components, a solvent (vegetable oil), and a surfactant system which operates to be more easily stored, handled and transported and maintains their pesticidal activity. **There is no teaching or suggestion that would motivate or lead one to use a vegetable oil for any purpose other than for use as a solvent for a known pesticide.**

As previously stated, the Applicants respectfully submit that the composition of Henriet comprises a **pesticide** and a **solvent** which can be a vegetable oil. In contrast, the method of Claims 42 comprises the step of **producing a pesticide** which comprises about 40% to about 90% by weight of vegetable oil. In this way **unlike** the vegetable oil of Henriet whereby the vegetable oil is used as a **solvent for a pesticide**, the vegetable oil of the subject application **operates as a pesticide**. Claim 42, as amended, comprises about 40% to about 90% vegetable oil and provides the pesticide effect of the subject composition and is an inherent and disclosed property and is part of the invention. **The recognition** that the vegetable oil operates as a pesticide is nowhere shown in the cited reference. The Applicants respectfully submits **that recognition of this functionality is**

**essential to the obviousness of conducting experiments to determine the amount of vegetable oil to be used in the composition.** Accordingly, the Applicants submit that one skilled in the art would therefore **not be motivated to determine the optimum amount of vegetable oil to be used as a pesticide but would rather be motivated at the most to determine the optimum amount of vegetable oil to be used as a solvent** for the particular pesticide used in the composition.

In view of the foregoing The rejection of Claims 35, 42 - 44 under 35 U.S.C. 103(a) as being unpatentable over Henriet et al. should be withdrawn.

#### **SUMMARY:**

The Applicants have presented claims to a new and novel composition. To support the conclusion that the claimed combination is directed to obvious subject matter, there must be something in the cited references that reasonably suggest or teach the claimed invention. Even if all the elements of a claim are disclosed in various prior art references, the claimed invention taken as a whole cannot be said to be obvious without some reason given in the prior art as to why one of ordinary skill would have been prompted to modify the teachings of the references to arrive at the claimed invention. The Applicants are unable to find any intrinsic basis in the references or any extrinsic factor that would prompt one of ordinary skill in the art to modify the teachings of the references along the lines of the subject invention. No reference shows or suggests the specific composition, properties, and results of the subject invention or suggests the claimed invention as a solution to providing a composition for protecting plants from frost or freezing temperatures or that vegetable oils have been used as a solvent for a pesticide. The Applicants respectfully submit that the references can only be used to show that certain compositions have in addition to numerous other ingredients, been used in other compositions but do not show any suggestion, teaching, or motivation to modify the composition along the lines of the subject invention. Indeed, if there is any motivation to modify the compositions of the cited references, it would be to improve the compositions as detergents or as in the case of Henriet et al., to derive the optimum solvent of a pesticide.



Consequently, the Examiner has not met the burden of establishing the prima facie case of obviousness based upon the claims, as amended.

In view of the foregoing amendments and remarks, it is respectfully submitted that all of the Claims now pending are allowable over the art of record. Reconsideration of all claims now in this application is respectfully requested.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Mark F. Smith", with a stylized flourish at the end.

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**MARKED UP COPY OF AMENDMENTS TO CLAIMS**

1. (Three Times Amended) An agricultural composition for producing a foam for use in protecting plants against frost or freezing temperatures [comprising] consisting essentially of:

about 40% to about 90% by weight of vegetable oil;

an emulsifier; and

a foaming agent;

wherein said vegetable oil is selected from the group consisting of coconut oil, corn oil, cottonseed oil, palm oil, rapeseed oil, soya oil and sunflower oil.

Please amend Claim 35 to the following:

35. (Twice Amended) A method of spraying plants comprising the steps of:

producing a pre-emulsion concentrate consisting essentially of about 40% to about 90% by weight of vegetable oil and an emulsifier;

mixing the pre-emulsion concentrate with water to form an oil and water emulsion; and

applying the oil and water emulsion onto the surfaces of the plants.

42. (Amended) A method of treating plants comprising the steps of:

producing a pesticide comprising about 40% to about 90% by weight of [a] vegetable oil and an emulsifier; and

applying the pesticide in water over the surface of the plants.